

R E M A R K S / ARGUMENTS

Claims 1-8 and 11 are present in the case.

Claims 1, 6 and 8 are amended.

The examiner has provisionally rejected claims 1-8 and 11 on the non-statutory grounds of obviousness-type double patenting over the commonly assigned and co-pending application 10/324,841. However, the examiner's premise for making the rejection is in error. The examiner's erroneous statement follows: "Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications disclose a steering rack mechanism with a nut and plastic retaining ring that is melted into place." (emphasis added). Only the subject application discloses a separate retaining ring, and it is not melted in place. In contrast, the earlier '841 application describes a plastic nut that is melted in place and does not show, describe or suggest a retaining ring, whether it be integrated or separate.

In the '841 application, the adjusting/closing nut 25 is formed from material having a softening/melting temperature lower than that of the housing, (page 7, lines 11 - 14). The adjusting/closing nut 25 includes a portion 31 that is locally plasticized or melted by a melting device 30 (page 10, line 21 - page 11, line 4, and page 11, lines 10 - 14). The melted portion of the nut resolidifies in form-locking engagement with the housing 110 (page 9, lines 6-14 and 18-21). Recesses 17 are formed on the inner circumference of the wall 114 about the nut 25 (page 9, lines 6 -10). When the portion 31 of the nut 25 is melted locally by the melting device 30, the melted material 31 flows radially outward into the nearby radial recess 17 on the wall 114. When the nut material cools and resolidifies it produces a radial projection 11, located in the recess 17, conforming to the shape of the recess 17, and locking the nut 25 onto the wall 114 (page 9, lines 18-21 and page 11, lines 5 - 9). The form-locking engagement of the nut 25 and wall 114 prevents inadvertent release of the nut from the wall (page 9, line 22 - page 10, line 2).

There is no mention in the '841 application of a separate retainer ring element. Likewise, there is no suggestion that one should substitute a separate retainer element in combination with a nut for the single and meltable nut element disclosed therein.

When making a rejection under these grounds, it remains a necessary requirement that the examiner must show that the claims if granted in the earlier '841 application would be unjustly extended if the claims of the present application were granted because the claims of the later application are not patentably distinct from the '841 application. No such showing has been made in this case.

Additionally, there is no breadth in the claims present in the earlier '841 application that would obviate the invention claimed in this application and such rejection, even provisionally, is not justified.

The '841 application does not in any way contemplate the use of a separate retaining ring with fingers that extend into the recesses when placed into the housing. The '841 application describes and claims a nut that is screwed into the housing and then melted to cause deformation to a degree that portions flow into the recesses and when cooled cause the nut to be locked in place. Further, the claims 1-18 of the '841 application do not suggest or obviate the idea or implementation of an embodiment that includes a separate ring retainer element.

For these reasons, Applicants believe that the provisional obviousness-type double patenting rejection should be withdrawn.

The examiner has objected to the typographical error on page in claim 1. That error is corrected in this response.

The examiner rejected claim 6 under 35 USC 112 as being indefinite for use of the term "in a way". The amendment of claim 6 describes the finger connected with the ring shaped body as having a property that when applying a torque above a threshold value to the ring shaped body the finger in the recess breaks off. Because the claim now states a structure in the form of a property, it is believed that this amendment overcomes the rejection.

Claims 1-4, 6-7 and 11 are rejected under 35 USC §103(a) as being unpatentable over Phillips in view of Peterkort.

Several misstatements were made by the examiner in attempting to support this rejection.

In so far as Phillips is represented by the examiner to teach a conventional housing opening 36 with internal threads 34 for receiving an adjusting nut 80,

Applicants agree. However, there is no showing or mention of "*at least one recess being provided in the housing, the recess being in direct proximity of the opening*" (claim 1 lines 5-6). Nor is there any mention or suggestion in Phillips that the conventional locking nut 82 should be modified with any elements to keep it secure. Rather, Phillips relies on the conventionally accepted notion that having the locking nut 82 threaded in the opening 36 so as to have its internal face tightly abutting against the outer face of the adjusting nut 80 causes frictional pressure to be applied between the surfaces of the threads of both nuts and the correspondingly contacted portion of threads 34 will keep both secured in place, and suggests no alternative.

It is further agreed, as noted by the examiner, that Phillips does not disclose the retainer, as claimed by Applicants.

Peterkort teaches a locking fastener for a threaded joint that employs an internally threaded nut 40 that is installed on external threads 34 of a spindle 14. The nut 40 contains grooves 52 and recesses 54 that extend radially towards the edge of nut flange 48. An unthreaded retaining washer 42 formed from stamped sheet metal contains an axial opening 56 that is slidably received over the threaded portion 34 of spindle 14. Spindle 14 contains an axially extending slot 60 for receiving the tab 58 of the retaining washer. The rim 62 of the retaining washer 42 is bent over the flange of the nut to be loosely captured on the nut 40. When the nut is threaded onto the spindle, the retaining washer does not rotate, but rides axially along the spindle with the nut as the nut is threaded thereon. The retainer ring also contains a series of recesses or holes 64 on its rim. When the nut is threaded to its desired position, spring clips 44 are inserted into the recesses 54 in the nut to engage both the nut and correspondingly located holes 64 to lock the nut in place.

Peterkort was cited by the examiner to show that Philips could somehow be modified to obviate Applicants' invention. The examiner states that: "It would have been obvious to one skilled in the art at the time the invention was made to add a finger to the retainer of Phillips as taught by Peterkort, the motivation would have been to prevent rotation of the retainer relative to the housing."

Under MPEP 2143.01 and the cases cited therein¹, the prior art must suggest the desirability of the claimed invention. This means that the teachings of the references, on their own, must be used to evidence the rejection and not reliance on the teachings made by Applicants. In this instance, neither Phillips nor Peterkort teach or suggest that the locking nut 82 used to secure nut 80 in Phillips is not sufficient for the purpose stated in Phillips. In addition, the examiner has failed to show how one skilled in the art would combine the cited references as required by the MPEP and the cases cited below. While Peterkort shows a way to secure an internally threaded nut using several elements that are unrelated to the claimed invention, there is no motivation in either of the references to make the combination alleged by the examiner. Therefore, the references as combined by the examiner are insufficient to support a rejection under 35 USC (103)(a).

Additional arguments against this rejection lie in the fact that even if one skilled in the art were to adopt the teachings of Peterkort in modifying Phillips to make a differently secured nut than is shown therein, it is unclear what the result would look like.

Although the examiner says that it would be obvious to "...add a finger to the retainer of Phillips, as taught by Peterkort...", Applicants argue that an internally directed finger (shown in Peterkort as tab 58) added to locking nut 82 would serve no function. One would logically ask what would the finger become engaged with and how would the locking nut 82 be rotated if it contained such a finger? Even if one were to redirect the finger outwardly (even though not taught by either Peterkort or Phillips) the locking nut 82 would still not be functional. There would be obvious confusion if one were told to make the modification as suggested by the examiner. Most certainly it would not result in Applicants' invention as set forth in the rehected claims.

¹ The Federal Circuit continues to provide guidance in these matters as it did in *In re Thrift*, 298 F.3d 1357, 1363 (Fed. Cir. 2002).

"To establish a *prima facie* case of obviousness, the Board must, *inter alia*, show "some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2D (BNA) 1596, 1598 (Fed. Cir. 1988). "The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. [**13] " *Kotzab*, 217 F.3d at 1370, 55 U.S.P.Q.2D (BNA) at 1317

As noted in the first part of this argument and contrary to the examiner's statement, Phillips does not describe or show "...at least one recess being provided in the housing, the recess being in direct proximity of the opening;" (claim 1, lines 5 – 6). Therefore, the examiner's alleged modification of adding a finger to the locking nut 82 would not result in "...the finger corresponding to the recess and being located and positioned in the recess," (claim 1, lines 8 – 9).

The rejection of claims 1-4, 6-7 and 11 is based on hindsight reconstruction of Applicants' invention rather than the clear teachings of the references and should be withdrawn.

Claim 5 is rejected under 35 USC §103(a) as being unpatentable over Phillips in view of Peterkort and further in view of Bradley. The foregoing arguments concerning the failure of Phillips and Peterkort to support the rejections of the independent claim 1, for instance, are applied equally to this rejection since claim 5 is dependent on claim 1.

Bradley discloses an anti-rotation lock that includes a pair of semi-circular wedge keys 21 and 22 in combination with a key loading ring 23 and a jam nut 24. The combination is slipped onto a male threaded member 16 that contains external threads 17 over portions of its circumference and unthreaded flats 18 and 19 on other portions. The threaded male member 16 is threaded into a female threaded member 10. When assembled, the wedge keys 21 and 22 are forced radially against the flats 18 and 19 on the male threaded member 16 and against notches 13 and 14 on the female threaded member 10 by the key loading ring and the jam nut 24.

While the wedge keys 21 and 22 each have an inner surface that corresponds to the flats 18 and 19 on threaded male member 16, there is no disclosure of "...the at least one finger defines an inner surface corresponding with the internal threads, projections being formed on the inner surface of the at least one finger.", as is recited in claim 5.

The application of Bradley is in error. Bradley neither teaches nor suggests the principal alleged by the examiner. Having combined Bradley with Philips and Peterkort, the examiner has provided nothing to support either the rejection of claim 1 or claim 5. This is clearly a misapplication of references and fails to properly support the rejection. Therefore, the rejection of claim 5 should be withdrawn.

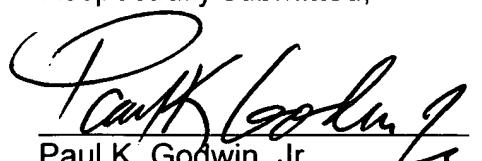
Claim 8 is rejected under 35 USC §103(a) as being unpatentable over Phillips in view of Peterkort and further in view of Carlton. The foregoing arguments concerning the failure of Phillips and Peterkort to support the rejections of the independent claim 1, for instance, are applied equally to this rejection since claim 8 is dependent on claim 1.

Carlton teaches a spindle nut 5 being modified by removing a circular flange 6 from its face. While flange 6 does resemble a rib, the teachings of Carlton are away from the flange, since he is removing it from a conventional spindle nut. In any event, Carlton does not teach or suggest that the flange is "ultrasonically melttable", as is recited in claim 8.

For these reasons, it is argued that the rejection of claim 8 is not properly supported by the cited references and also should be withdrawn.

It is believed that the foregoing amendments to the claims of the subject application overcome the examiner's objections and rejections stated in the aforementioned Office Action. In addition, it is believed that the foregoing remarks have rebutted each argument set forth by the examiner in an attempt to advance prosecution and illustrate how the claimed invention is patentable over the prior art of record. Accordingly, the examiner is requested to withdraw the rejections and pass the case to issue.

Respectfully submitted,



Paul K. Godwin, Jr.
Registration No. 27725
Attorney/Agent for Applicant(s)

Date: 11/15/2006
% MacMillan, Sobanski & Todd, LLC
Phone: 734-542-0900
Fax: 734 542-9569